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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,507	09/08/2003	William H. Shepard	05918-133002	9338
26161	7590	08/25/2004	EXAMINER	
FISH & RICHARDSON PC 225 FRANKLIN ST BOSTON, MA 02110			BEFUMO, JENNA LEIGH	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/657,507	Applicant(s) SHEPARD ET AL.	
	Examiner Jenna-Leigh Befumo	Art Unit 1771	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 8,22 and 24-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-11,13-21,23 and 39 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>01/04, 09/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I in the reply filed on June 18, 2004 is acknowledged. Further, the applicant elected the claims drawn to a paper substrate and a nonwoven layer of hook-engageable material. Thus, claims 8, 22, and 24 – 38 are withdrawn from consideration as being drawn to a nonelected invention. Therefore, claims 1 – 7, 8 – 21, 23, and 39 are examined below.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 7, 9, 10, 11, 13 – 21, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shepard et al. (WO 99/11452) in view of Franz (5,224,895) and Nemec et al.(6,010,387).

Shepard et al. discloses a light weight nonwoven loop material for hook and loop fasteners. The nonwoven material is stretched and stabilized to produce spaced-apart loop clusters extending from taut fibers (abstract). Binder is added to the nonwoven to stabilize the structure in amount of between 20% and 40% of the total weight of the web (page 2, line 30 – page 3, line 3). The nonwoven material has a basis weight of less than 4 oz/yd<sup>2</sup>, preferably less than 2 oz/yd<sup>2</sup> (pages 1 – 2). The material is produced such that the fabric has tight knot regions made up of fibers between which are low density areas (page 13, line 35 – page 14, line 4). Also,

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the fabric can be produced by needles to form entanglements (page 22). While Shepard discloses that the loop product can be used in display systems (page 27), Shepard fails to teach what type of material is used to make the display system.

Franz is drawn to a hook-and-loop display system. Franz discloses that the display system can be made from durable plastic or paper materials of any desired thickness or strength (column 4, lines 10 – 16). Further, pieces are designed to be releasably attached to the nonwoven hook-engageable surface. Therefore, it would have been obvious to one having ordinary skill in the art to choose a display system made from paper, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. One of ordinary skill would choose paper, since paper is light-weight, easy to carry around, readily available, and inexpensive. Therefore, claims 1 – 7, 9, 13 – 15, and 39 are rejected.

Nemec et al. discloses a display system which comprises a display board and a covering member made from a hook or loop material so that additional hook or loop components can be placed on the display board (abstract). Nemec discloses that the display board is made from a corrugated material which is lightweight and rigid (column 4, lines 15 – 25). Therefore, it would have been obvious to one of ordinary skill in the art to use a display board having a rigid corrugated board as taught by Nemec et al. with the loop material taught by Shepard et al. since Shepard et al. teaches the nonwoven material can be used in display boards. Thus, claims 10, 11, and 13 – 21 are rejected.

4. Claims 1 – 7, 9 – 11, 13 – 21, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawless (5,891,547) in view of Franz and Nemec et al.

Lawless discloses a lightweight nonwoven loop fabric produced by needle-punching fibers to form a plurality of loops (abstract). The loop material releasably attaches to other components which have a layer of hooks on the surface. The fabric has a basis weight of 1.5 to 4.0 oz/yd<sup>2</sup> (abstract). The nonwoven material is produced by needle-punching which creates high and low density areas throughout the material (column 1, lines 39 – 40). The needle-punched fabric would inherently have some straightened fibers. A binder is added to the fabric to impart dimensional stability (column 3, lines 42 – 44). Lawless discloses the nonwoven material is made by an efficient and cost-effective process (column 3, lines 37 – 39). Further Lawless discloses that the nonwoven material can be combined with backing layers or may optionally be attached directly to a finished article (column 5, lines 45 – 51). However, Lawless fails to teach using paper as the backing layer.

Franz is drawn to a hook-and-loop display system. Franz discloses that the loop material can be attached to various materials such as durable plastic or paper materials of any desired thickness or strength (column 4, lines 10 – 16). Further, pieces are designed to be releasably attached to the nonwoven hook-engageable surface. Therefore, it would have been obvious to one having ordinary skill in the art to choose a display system made from paper, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. One of ordinary skill would choose paper, since paper is light-weight, easy to carry around, readily available, and inexpensive. Therefore, claims 1, 2, 4, 5, 6, 9, 13 – 15, and 39 are rejected.

The features Nemec et al. have been set forth above. It would have been obvious to one having ordinary skill in the art to use a corrugated board as a substrate for the nonwoven hook-

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engageable material taught by Lawless since the board will provide more strength to the display system during use, while still being lightweight and durable. Attaching the Lawless nonwoven material to the plastic substrate will also increase the marketability of the loop material.

Therefore, claims 10, 11, and 16 – 20 are rejected.

Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the binder in the claimed range, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Adding more binder would help to increase the bond strength of the fibers and increase the durability of the fabric. Therefore, claim 3 is rejected.

Additionally, Lawless discloses that the weight and transparency of the fabric directly relate to the needle-punching process (column 4, lines 4 – 16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the claimed ratio of high areal density to low areal density, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would be obvious to optimize the needle-punch process, to produce a transparent, low weight fabric with the necessary strength and loops produced for the material to act as a hook-engageable fabric. Therefore, claims 7 and 21 are rejected.

5. Claims 1 – 2, 4, 5, 6, 9, - 11, 13 – 20, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemec et al. in view of Lawless and Franz.

The features of Nemec et al. have been set forth above. Nemec et al. fails to teach the structure of the loop material in the display system. Lawless is drawn to a hook-engageable

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material. Lawless discloses the nonwoven material is made by an efficient and cost-effective process (column 3, lines 37 – 39). Thus, it would have been obvious to one having ordinary skill in the art to substitute the loop material taught by Lawless for the loop material on the display system of Nemec et al. because the Lawless loop material easily engages with hook fasteners and is more cost-effective than knit or woven loop fabrics.

Additionally, Nemec fails to teach using a paper substrate. Franz is drawn to a display system. Franz discloses that while the preferred material is a durable plastic material additional materials which provide sufficient strength to prevent deformation such as paper of any desired thickness or strength may be substituted as desired (column 4, lines 10 – 16). Therefore, it would have been obvious to one of ordinary skill in the art to substitute a paper sheet or various thickness and strength for the durable plastic layer taught by Nemec since Franz discloses these material are equivalents. Further, one of ordinary skill in the art would be motivated to use paper since paper is readily available, inexpensive, and bio-degradable. Therefore, claims 1 – 2, 4, 5, 6, 9, - 11, 13 – 20, and 39 are rejected.

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shepard et al., Franz, and Nemec et al. as applied to claim 1 above, and further in view of Powell (5,603,504), and Bricker (5,664,780).

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lawless, Franz, and Nemec et al. as applied to claim 1 above, and further in view of Powell and Bricker.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nemec et al., Lawless, and Franz as applied to claim 1 above, and further in view of Powell and Bricker.

The features of Shepard et al. Lawless, Nemec et al, and Franz have been set forth above. Shepard et al, Lawless, and Nemec et al. fail to teach printing the loop material. Powell and Bricker are drawn to hook-engageable loop fabrics. Powell et al. shows a game board to which a marker or ball is releasably attached (column 1, lines 64 – 67). The game board has lines and figures, shown in Figure 4, which are painted or silk screened onto a cloth having a roughen surface (column 2, lines 58 – 63). Further, Bricker discloses a tracking system which comprises a board with an image of a baseball field printed on the surface (Figure 1). The board is made from a material to which tokens can be releasably anchored (column 5, lines 22 – 24), such as VELCRO hook and loop material (column 5, line 36). As shown by these three references, it is well known to apply graphic images to the loop material of hook and loop fabrics. Therefore, it would have been obvious to one having ordinary skill in the art to apply a graphic image to the loop material on the display unit taught by Shepard et al. to increase the number of designs that can be produced with the attachable pieces or to change the background of the drawings. Also, since Shepard et al. disclose the display can be used as a display system, it would have been obvious to one having ordinary skill in the art to apply graphic designs to the display board to decorate the display and make it more appealing to customers. Therefore, claim 23 is rejected.

***Allowable Subject Matter***

7. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



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8. The following is a statement of reasons for the indication of allowable subject matter:  
The prior fails to teach or fairly suggest applying the loop fabric for a hook and loop fastener directly to the flute regions of a corrugated core.

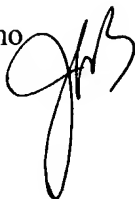
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (571) 272-1472. The examiner can normally be reached on Monday - Friday (8:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jenna-Leigh Befumo  
August 23, 2004



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DEPUTY EXAMINER